

FIG. 1

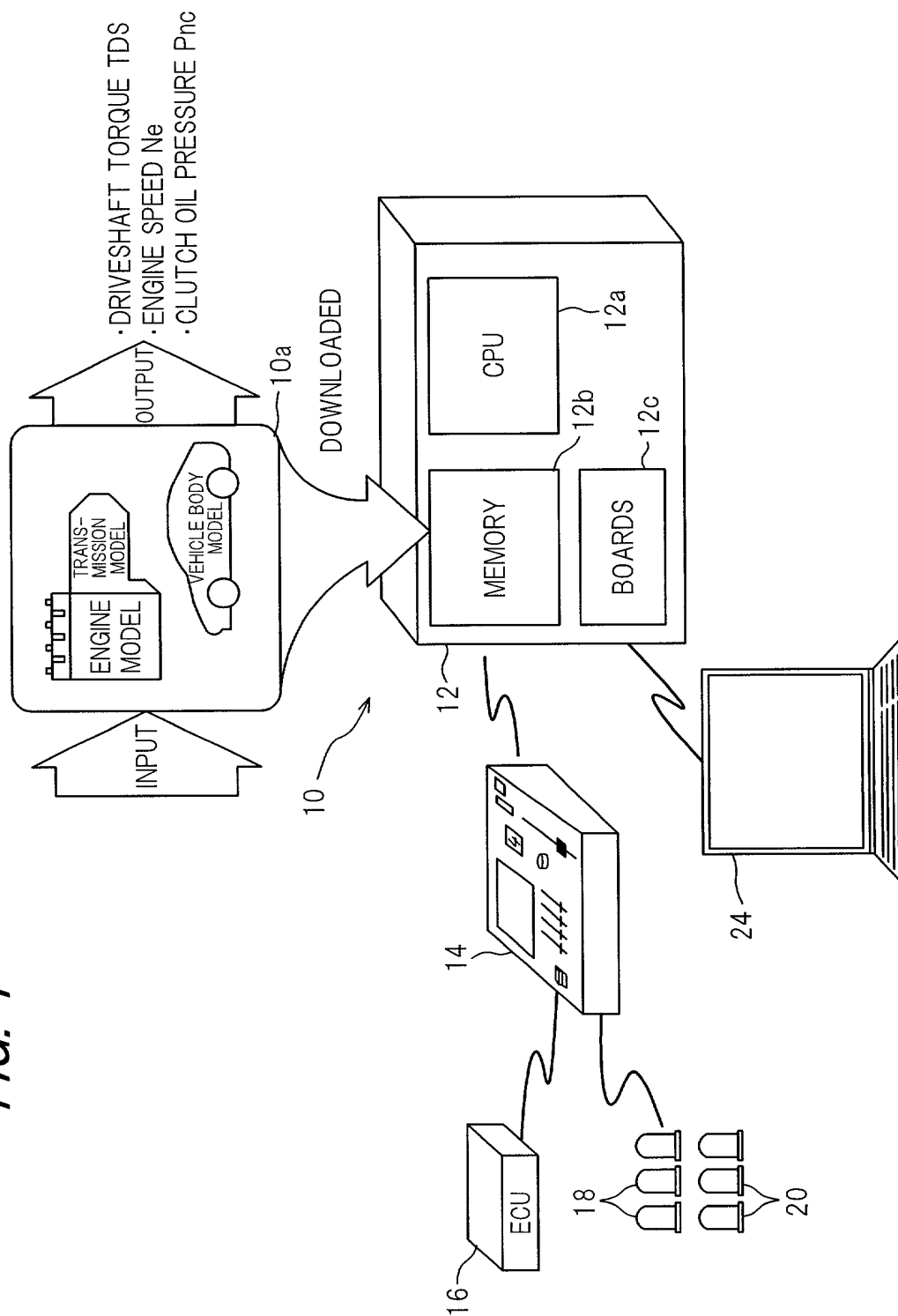


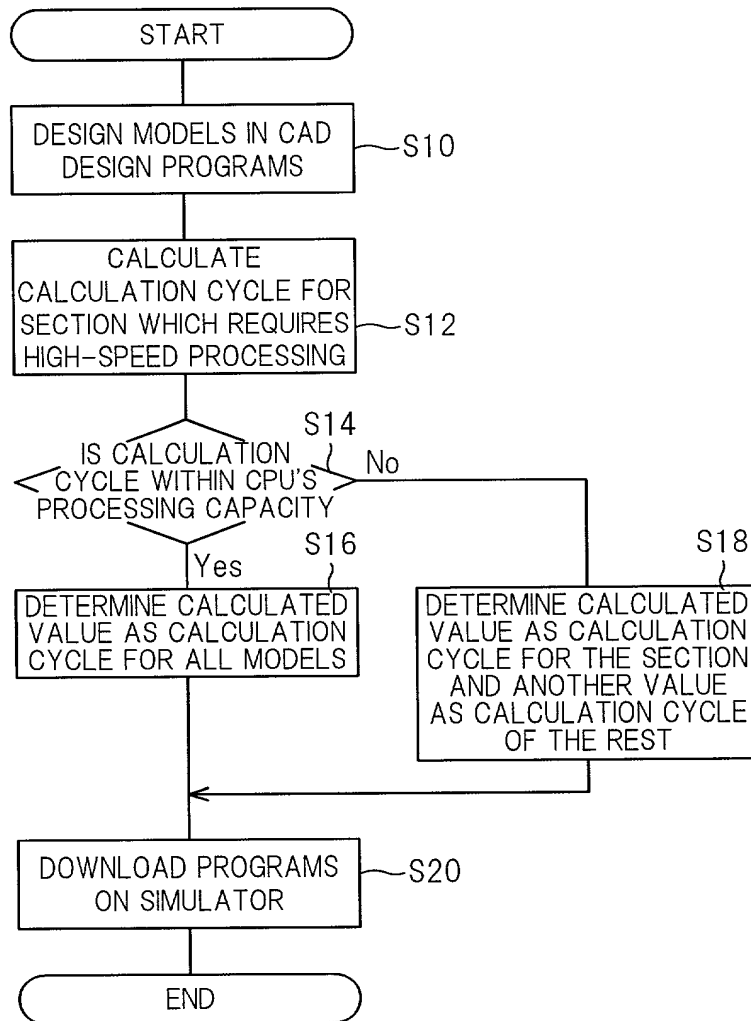
FIG. 2

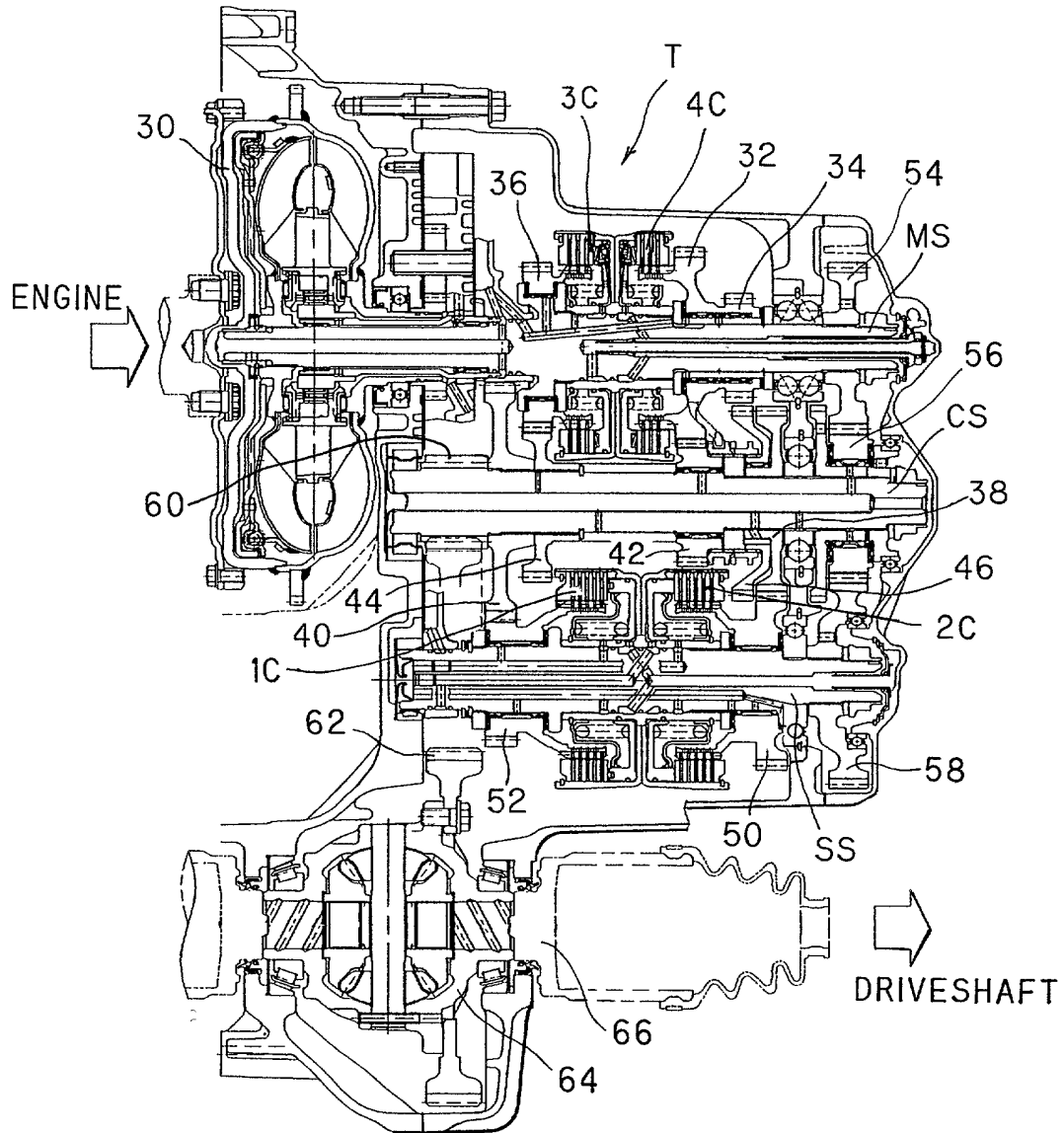
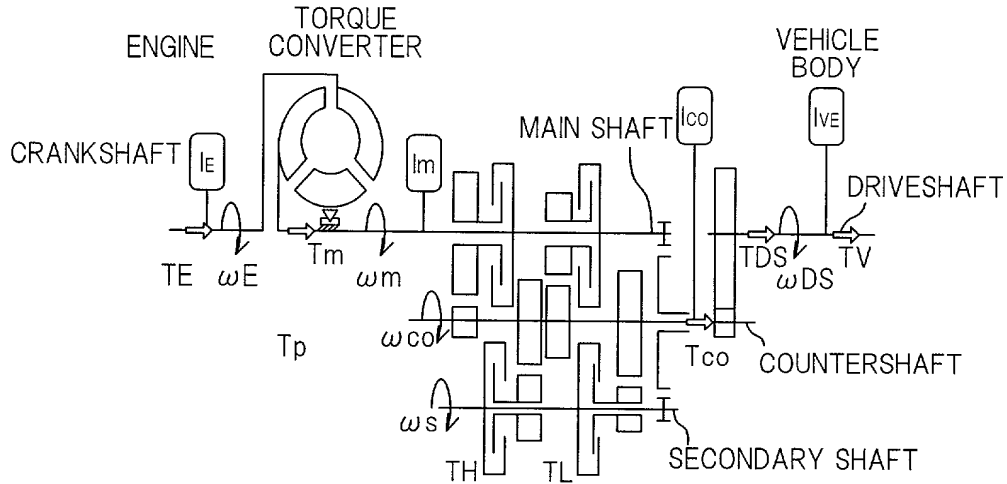
FIG. 3

FIG. 4

$$\text{ENGINE} \quad TE - T_p - IE \cdot \dot{\omega} E = 0 \quad (1)$$

$$\text{TORQUE CONVERTER} \quad T_p = \tau (\dot{\omega} E / 1000)^2 \quad (2)$$

$$T_m = \kappa \cdot T_p \quad (3)$$

$$\text{MAIN SHAFT} \quad T_m - T_L - T_H - I_m \cdot \dot{\omega} m = 0 \quad (4)$$

$$\text{COUNTERSHAFT} \quad T_{co} - T_L \cdot i_L - T_H \cdot i_H + I_{co} \cdot \dot{\omega} co = 0 \quad (5)$$

$$\text{DRIVESHAFT} \quad TDS = T_{co} \cdot i_F \quad (6)$$

$$TDS - TV - IDS \cdot \dot{\omega} DS = 0 \quad (7)$$

TRANSITION AL SHIFT PHASE

PHASE	MAIN SHAFT	COUNTER SHAFT
LOW-GEAR DRIVE	$T_m = T_L \quad (8)$	$T_{co} = T_m \cdot i_L \quad (9)$
TORQUE PHASE	$T_m = T_H + T_L \quad (10)$	$T_{co} = T_m \cdot i_L - T_H \cdot (i_L - i_H) \quad (11)$
INERTIA PHASE	$T_m = T_H - I_m \cdot \dot{\omega} m \quad (12)$	$T_{co} = T_H \cdot i_H \quad (13)$
HIGH-GEAR DRIVE	$T_m = T_H \quad (14)$	$T_{co} = T_m \cdot i_H \quad (15)$

IN THE ABOVE,
 T_L : HIGH-GEAR CLUTCH TRANSMISSION TORQUE AND
 T_H : LOW-GEAR CLUTCH TRANSMISSION TORQUE

FIG. 5

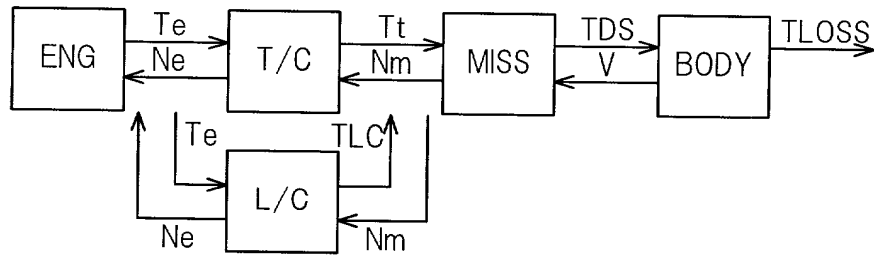


FIG. 6

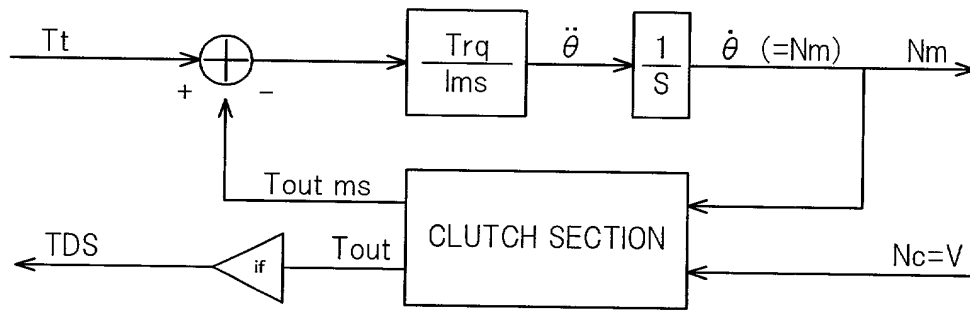


FIG. 7

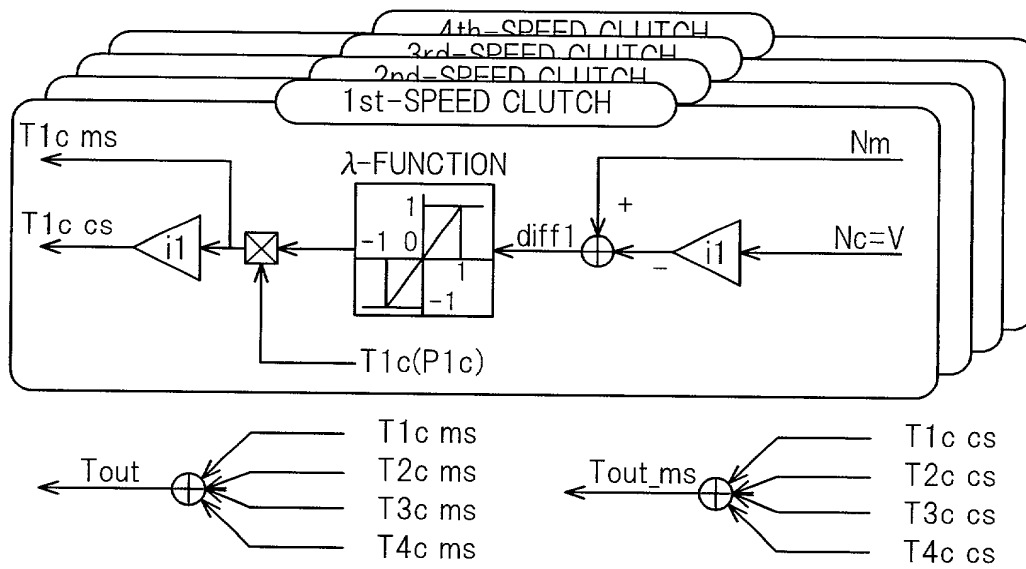


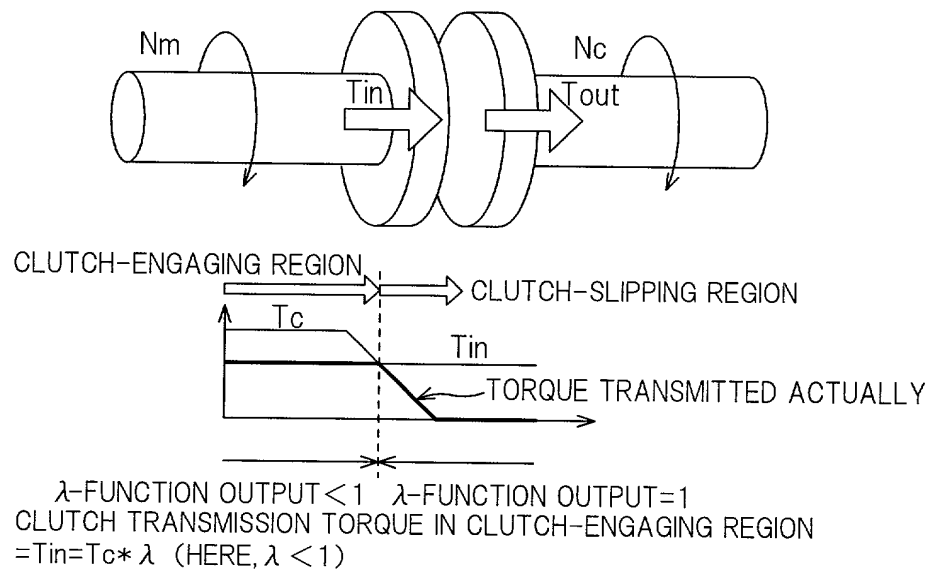
FIG. 8

FIG. 9

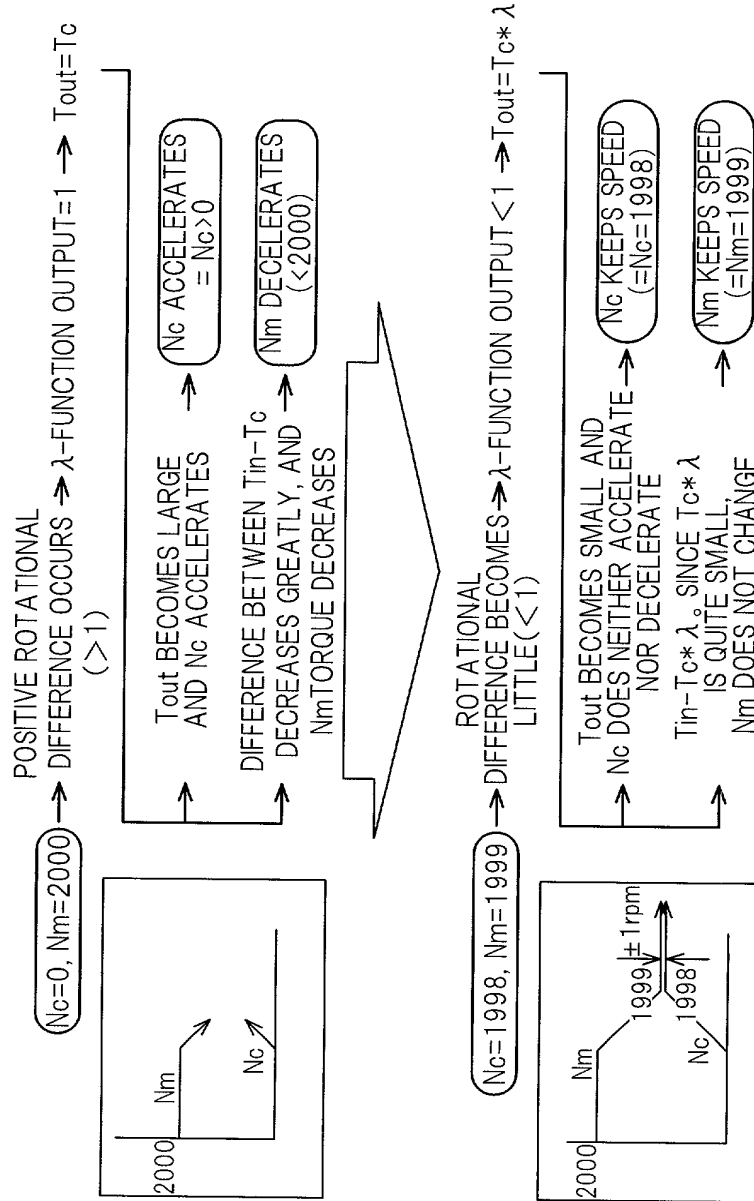


FIG. 10

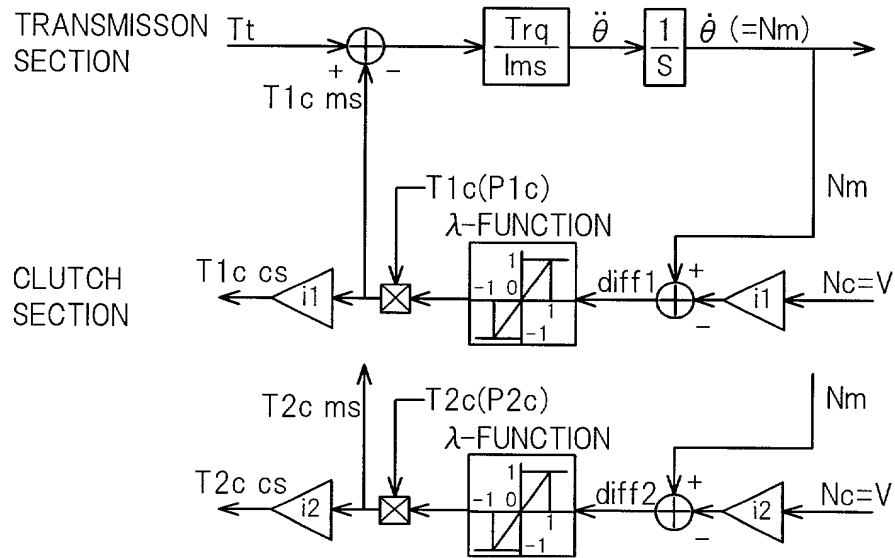


FIG. 11

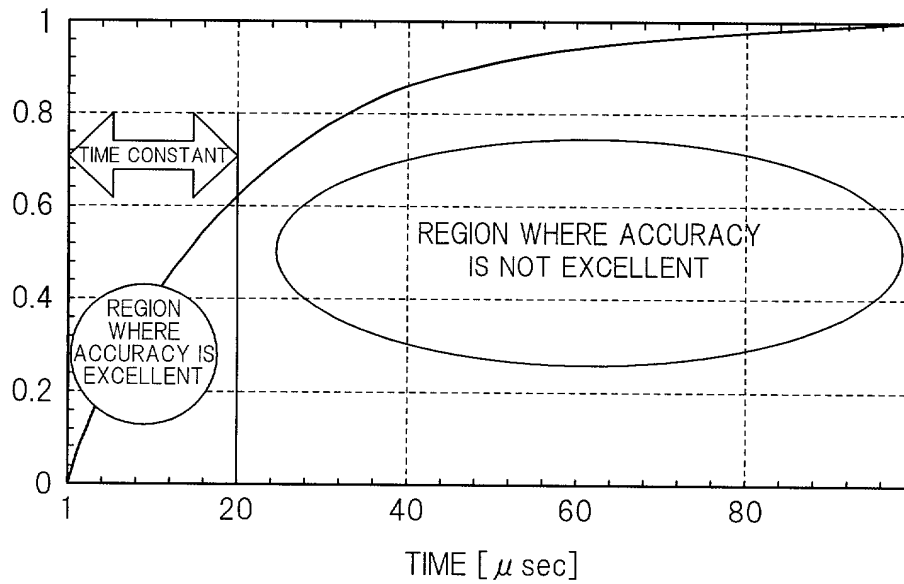
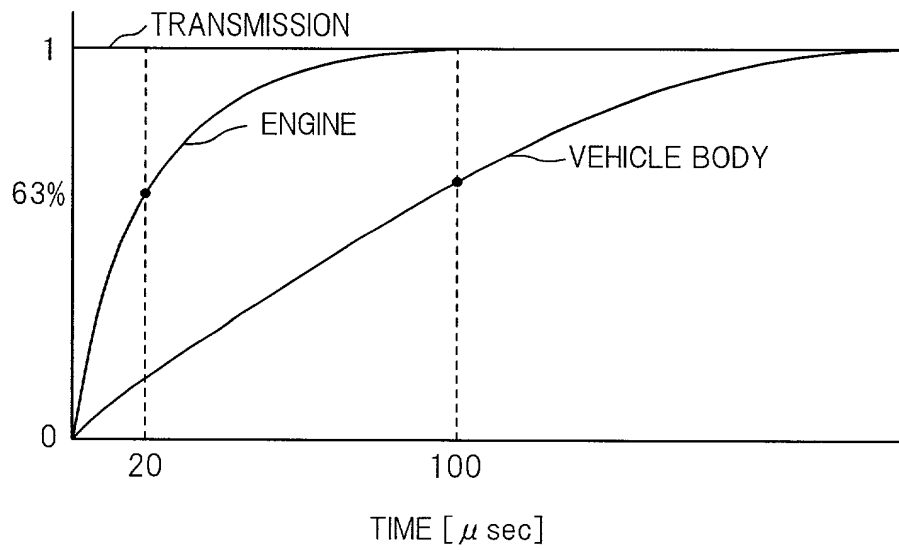


FIG. 12

ENGINE INERTIA=0.3kgf·m²

TRANSMISSION INERTIA=0.007kgf·m²

VEHICLE BODY INERTIAL(CONVERTED)=130.5kgf·m²

FIG. 13

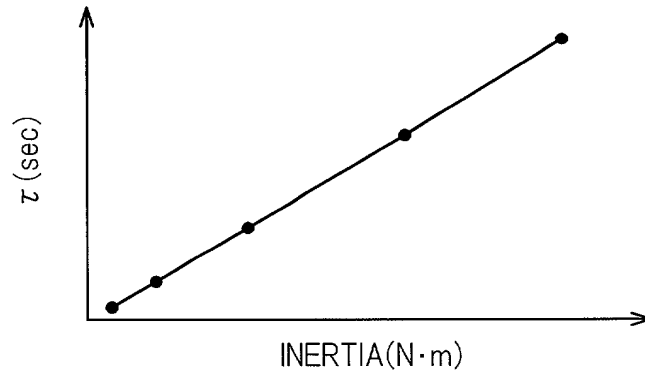


FIG. 14

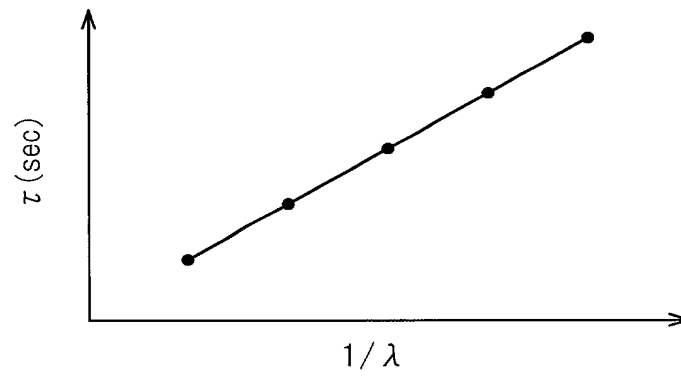


FIG. 15

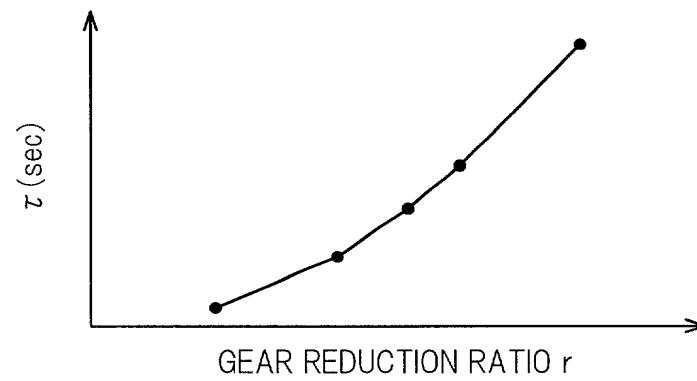


FIG. 16

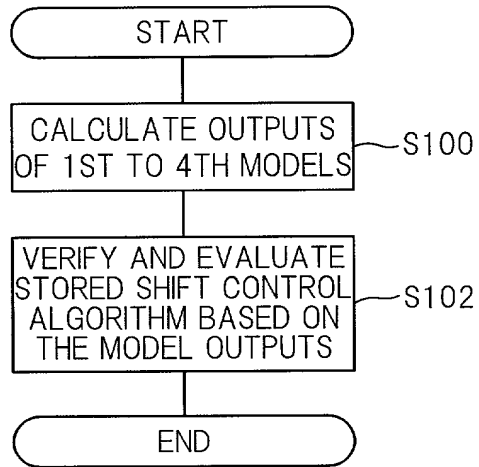


FIG. 17

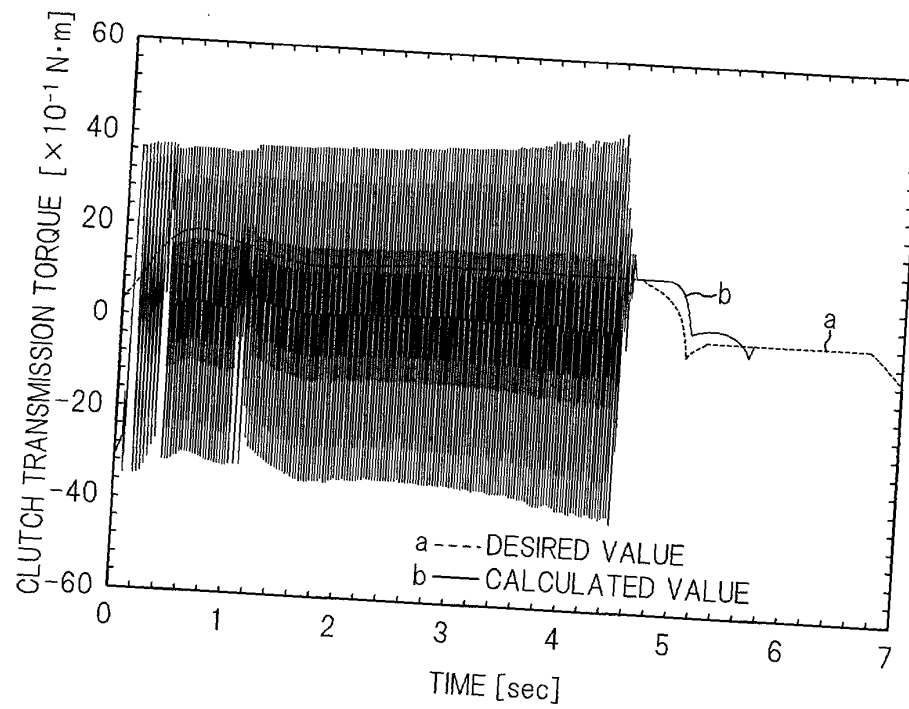
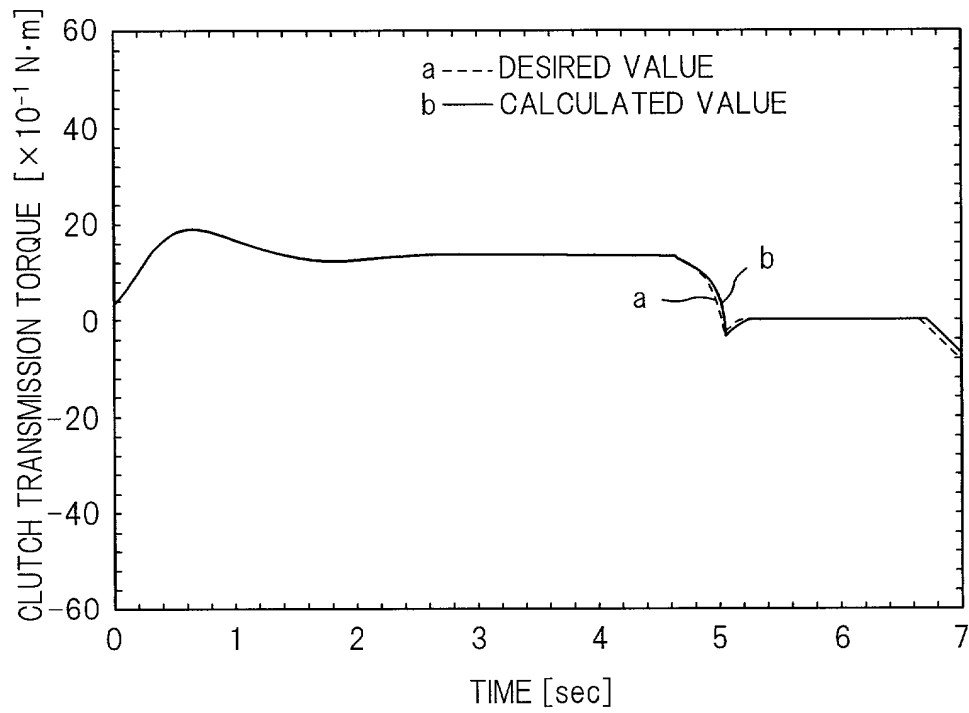
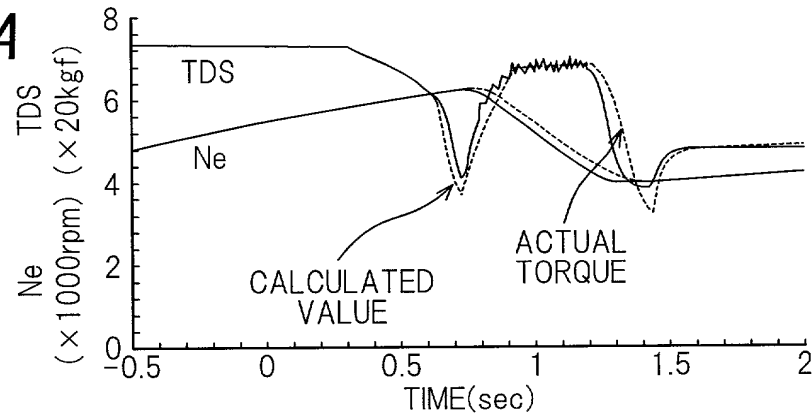
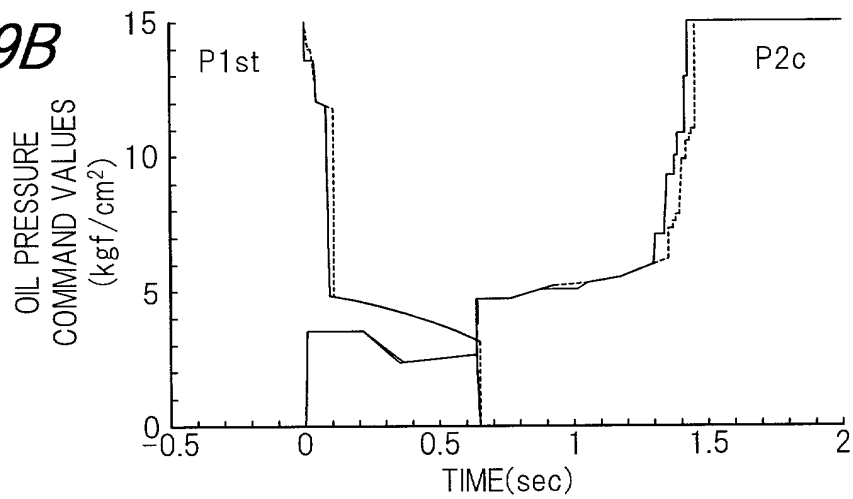


FIG. 18

—: ACTUAL VALUE, ----: CALCULATED VALUE

th=WOT

FIG. 19A**FIG. 19B****FIG. 19C**